

**Student motivation in and out of the school context –
The relationship between achievement goal
orientation profiles and personal goals.**

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1. Introduction

Motivation has been for decades a central topic in fields of developmental, cognitive and personality psychology (Shah & Gardner, 2008). Motivation is understood in the behavioral research field as an important factor in understanding differences in individuals' behavior, thinking, learning and personality. Motivation has been conceptualized in several different ways, for example as needs, drives and so forth. As a concept motivation is somewhat abstract and blurry. It is very common to talk about "being highly motivated", or "to lack motivation". In the present study I will adopt an approach where motivation is observed at the goal level (Covington, 2000). In the approach adopted here, motivation is understood, not as an on/off type of thing, but instead as a multidimensional cognitive-affective psychological system (Pintrich, 2000). To study the nature of ones' motivation, it is fruitful to study the kinds of goals and outcomes that one prefers. Goals are understood here as the outcomes of different psychological processes such as perceiving and interpreting the environment, forming interpretative schemas and inner working models, and constructing personal standards of preferable outcomes. In other words, goals are thought to be a "window" to the mental processes that are behind individuals' different ways of acting, thinking, learning and feeling.

The present study focuses on investigating the relationship between adolescents' achievement goal orientations (Niemivirta, 2002b) and personal goals (Little, 1983). Achievement goal orientations refer to the students' approach for pursuing different educational goal. These goals represent rather stable dispositions related to kinds of goals students tend to choose and the kinds of outcomes they prefer in relation to studying. In a very general level, students who display goals related to learning and understanding have the most adaptive orientation, whereas students who focus on competitive goals and work avoidance goals have less adaptive orientations. In the approach adopted here it is assumed that people endorse multiple goals and that these goals together produce different behavioral patterns and outcomes (Tuominen-Soini, Salmela-Aro & Niemivirta, 2012). Of interest in the adopted approach is not only how

these goals affect learning and success in school, but also how they are related to different well-being constructs such as self-esteem and stress (Tuominen-Soini, Salmela-Aro & Niemivirta, 2008).

The personal goals are the various goals related to a variety of life-domains, such as career, hobbies and relationships that the young people endorse (Little, 1983). Personal goals that are in line with the age-congruent developmental task endorsed in the given culture are thought of as a key to successful development (Cantor, Norem, Niedenthal, Langston, & Brower, 1987). The personal goals are thought to work as the “doing” side of personality, and thus, to function as key to investigating the functioning of personality dispositions (Cantor 1990). Although related to personality, personal goals are considered malleable, and interventions directed at changing goals have been found to be beneficial in clinical treatment with patients suffering from problems with psychological well-being (Salmela-Aro, Pennanen & Nurmi, 2001). It has been suggested that for example personal goals related to relationships work as a buffer against burn-out when an individual is under workload (Salmela-Aro & Nurmi, 2004).

The two traditions share the assumption that goals work as a vehicle for steering ones psychological development. The adopted goals in school and other domains affect the subsequent development with regards to various cognitive, affective and motivational functions. In addition, as they affect the subsequent choices and actions, they affect what opportunities will be available in later life. Another core assumption the two approaches share is that goal formation is affected by the individuals’ mental structures (ways to perceive and interpret the world, various beliefs, self-image, personality etc.). Studying personal goals and achievement goals can give us insight into different cognitive and affective functions in a way that more “entity” like disposition cannot. Following from the idea of concentrating on the interplay of various factors, a person-centered approach is adopted in this study (see for example Bergman, Magnusson & El-Khoury, 2003). This means, that instead of focusing on single isolated variables, the focus is on studying how different variables such as goal orientations create different patterns of individual functioning. Thus, the focus should be on the person as a functioning whole, not the displayed variables. It is suggested here that both achievement and personal goals should be considered in the framework

of development. We should understand this developmental framework in a broad sense, with a special interest on cognitive development and well-being. Another core assumption the two approaches share is that goal formation is related to the individuals' psychological make-up including cognitive functions and personality dispositions. Studying personal and achievement goals can give us insight into different cognitive and affective functions. If the two goal constructs are considered together, we might be able to form a more comprehensive picture of the psychological development and functioning of an individual.

It is important to consider both achievement goals (more specific to school-domain) and personal goals with regards to the development of life paths as their effects depend on the developmental phase a person is experiencing (see for example Tuominen-Soini et al., 2012; Salmela-Aro, 2009). The goals one sets for oneself affect the adaptation to the circumstances and they play an important role especially in different educational and other life-transitions. Some goal choices and the subsequent behaviors and strategies are more adaptive than others. A gap between the achievement and personal goals and the educational and age-graded developmental demands heightens the risk of educational disengagement and might cause problems in subjective well-being (Eccles & Midgley, 1989).

The present study contributes to the growing body of achievement goal orientation research. A question of interest here is whether achievement goal orientations might have effects on goals beyond the school context. Achievement goal orientations work as a persons' interpretative framework through which situations and their demands are perceived, interpreted and acted on. To date it has not been studied whether these same processes are involved in other goal domains. If achievement goal orientations are related to the way young people construct their personal goals, this might have important consequences. As personal goals play a key role in successful development and entrance to adulthood it would be of interest for the educators to identify those students with maladaptive achievement goal orientations. Also the possibility that goals outside the school domain might affect what goals students adopt in achievement situations in the classroom should be taken into consideration. If the maladaptive goal choices accumulate to some specific students, these students are at a higher risk of disengaging from education, work and other essential aspects of

satisfying adult life. Together the functioning of personal and achievement goals can help the researchers to understand better how maladaptive patterns emerge and the functioning of the mechanisms between multiple psychological factors.

1.2 Achievement goal orientation

Achievement goal research is a more specified area of research that focuses on the goals people set in a learning context. The most typical achievement context is studying, but also the contexts of work and sports can be understood as achievement situations (see for example Dysvik & Kuvaas, 2013; Boardley & Jackson, 2012). Achievement goal orientations are in general defined as a preference for certain outcomes in an achievement context.

Before describing achievement goal orientation research, few issues need to be pointed out. In the present study I will adopt the dispositional approach meaning, that instead of situational achievement goals I will concentrate on the individuals' dispositional preference for certain outcomes in achievement context. The line between a stable orientation and a situational goal is however somewhat blurry in the literature and different researchers have conceptualized the achievement goals in several different ways (goal states, situational goals, goals as dispositions). It is a challenge for both the writer and reader to draw a clear comprehensible picture of the achievement goal research field as it includes multiple discourses. Even when discussing the research with similar terminology, the empirical approaches and conceptualizations vary between different researchers. Next, I will concentrate on the *achievement goals* and their outcomes.

Even though there are several disagreements regarding the nature of achievement goal orientations, most researchers agree on the contents of the achievement goals. In the beginning of the tradition achievement goal orientations were divided into performance and learning goals (Nicholls, 1984; Dweck, 1986). Performance goal refers to trying to demonstrate ability in order to appear competent. The learning goal refers to the goal of trying to increase ones competence, e.g. knowledge and skills. Later a valence dimension has been added in to the dichotomous model (Elliot &

Church, 1997). In this model the performance goal is divided into approach and avoidance goals. Performance-approach goal means the goal of trying to outperform others in order to appear more competent than others and performance-avoidance goal refers to trying to not appear incompetent and to avoid tasks that could reveal ones lack of ability.

There are some goal types that not all the researchers agree on. For example Elliot has expanded his valence theory into mastery goals, and he claims that also mastery goals can be divided into approach and avoidance goals (Elliot, Murayama & Pekrun, 2011). Mastery-avoidance in this case refers to trying not to lose skills one has acquired. In some approaches the mastery dimension has further been divided into intrinsic and extrinsic mastery (Niemivirta 2002b). In the intrinsic mastery learning and understanding are the main motives. The extrinsic mastery instead refers to the goal of getting good grades. The important difference between the extrinsic mastery goal and the performance-approach is that while the former refers to the absolute success, the latter is concerned with relative success. This means that a student holding mastery-extrinsic goals draws his or hers standards of performance from the formal evaluation scale, while the standard of excellence for a student with performance-approach goals is related to social comparison and outperforming other students. Dweck and Grant (2003) have also in a similar vein divided performance-approach orientation into ability-linked goals (demonstrating ability and validating self-worth), normative goals (outperforming others) and outcome goals (performing well).

The “forefather” of modern achievement goal research, Nicholls included work avoidance (trying to do as little school work as possible) into his achievement goal model (Nicholls, Patashnick & Nolen, 1985). This has later been adopted in *achievement goal orientation* research, with the term “avoidance” (Tuominen-Soini et al., 2008). There has been some debate about whether the avoidance goals can be included into achievement goal theory. Elliot and his colleagues (1997) for example claim that the definition of achievement goal is the aim to increase or to preserve competence (whether the competence means absolute competence or competence in relation to other people) and any factors unrelated to competence (work avoidance) are left out of the model.

Achievement goal are related to a variety of outcomes. Mastery has been found to be related to high achievement, intrinsic motivation and enhanced well-being (Dweck et al., 2003; Tuominen-Soini et al., 2008). Learning or mastery goals have been associated with active coping and they appear to be a powerful predictor of behaviors that will preserve intrinsic motivation and performance in the face of difficulty (Dweck et al., 2003).

Like mastery, performance-approach is also related to high achievement and the effect has been found to be even stronger for performance-approach than for the mastery goals (Harackiewicz, Barron & Elliot, 1998). The detected effects of the performance-approach depend however on the way this orientation has been conceptualized. On the other hand this orientation is related to enhanced achievement, but on the other also to giving up easily in the face of a failure and to negative emotions (Dweck, 1986). This discrepancy is understandable since some of the studies have separated the performance-approach into social-referent and self-referent dimensions while others have not. Some of the researchers have further divided the performance-approach goals (Dweck et al., 2003) or performance-approach orientation (Niemivirta, 2002b) into two separate dimensions¹. This means, that the goal in both of the dimensions is the performance, but the adopted standards of achievement are either based on relative (social comparison) or absolute (grades) success. In both of the dimensions goals are extrinsic in the sense that the focus is on the outcome of validating and demonstrating ability. The consequences for these orientations are however different. Students with performance-goals, who use social-comparison as their standards of excellence are more prone to give up in the face of a failure (Elliot & Dweck, 1988). Performance-approach (ability) goals can predict impaired motivation and performance after setbacks and they are also linked to negative effects on subjective well-being such as burn-out and stress. Performance-approach is highly correlated with performance-avoidance (the fear of failure), which could explain why students displaying performance-approach have negative emotional outcomes since they are more likely to also display performance-

¹ The observed outcomes depend not only on the conceptualization of the nature and content of the achievement goal, but also on whether we are talking about situational goals or more stable orientation towards favoring certain types of goals.

avoidance, which in it self is linked to many negative outcomes (Tuominen-Soini et al., 2008). Thus, it is not sure whether it is the performance-approach per se that leads to negative outcomes, or the combination of this and the performance-avoidance.

Performance-orientation can have also another dimension, which has been referred to as mastery-extrinsic-orientation² or as outcome goals³ (Niemivirta 2002b; Dweck et al., 2003). In this orientation learning is also considered as instrumental, as the main goal is to perform well with regards to some absolute standard such as grades. This type of motivational orientation seems to be beneficial as it is related to high performance, but unlike the performance-approach it does not seem to be related to stress or burn-out (Tuominen-Soini et al., 2008). Since the social-comparison component is not present in this orientation, there is no pressure of having to outperform others. It has also been suggested, that the difference between the performance and outcome goals is that the former is an ability goal (Dweck, 1986). The main goal is to demonstrate ability in order to validate ones self-worth. In face of a failure students with performance-approach goals (or ability-goals) interpret the setback as a lack of ability and this in turn diminishes their sense of self-worth.

Both performance-avoidance and avoidance are related to negative outcomes such as low achievement and many negative affective outcomes (Tuominen-Soini et al., 2008; Elliot et al., 1997). The effects differ however greatly depending on whether they appear together or not. This issue of multiple goals and their effects will be discussed later as I present the theoretical approach adopted in this study.

The researches in general agree on most of the outcomes discussed above, but there are differences in how the outcomes have been studied in different approaches. In the person-centered approach (Niemivirta, 2002a), the interest is not only on the

² Mastery-extrinsic was in the original study referred to as achievement orientation and mastery-intrinsic as the learning orientation.

³ It is important to note here that mastery-extrinsic refers to a certain type of achievement goal orientation whereas the outcome goal to a situational goal. The former represents individuals' general preference for certain types of goals, the latter is a goal specific to a certain situation. We must consider the level of the conceptualization in different studies before drawing any conclusions about the consequences possible outcomes.

situational goals in a classroom setting, but also in the way that the goals and their outcomes affect subjective well-being and how these motivational tendencies evolve over time (Tuominen-Soini et al., 2012). Studies have demonstrated achievement goal orientations to be rather stable dispositions (Tuominen-Soini, Salmela-Aro & Niemivirta, 2011), which means that they might have also long-term outcomes that set forth stable patterns with regards to many aspects in life. Achievement goal orientations have been studied in the context of educational transitions, such as moving from lower secondary to upper secondary school (Tuominen-Soini et al., 2012). It has been suggested that adaptive achievement goal orientations might contribute to the successfulness of this process. The focus in the person-centered approach is on how the multiple goal orientations (goal dimensions) by functioning together produce different behavioral patterns that set forth different achievement trajectories and affect the way individuals adapt to the demands in the classroom.

1.2.1 The antecedents and conceptualization of achievement goal orientations

A question of whether goals emerge from needs or beliefs has also divided the research field (for a review, see Covington, 2000). The need approach presumes that goal setting is guided by the different needs people experience such as need for achievement (Elliot et al., 1997). In the need approach it is thought that it is the sub-consciousness of a person that directs persons energy into different actions. Beneath our consciousness lie our basic needs that we, without being aware of our motives, work to fulfill.

As a contrary approach to this psychoanalytical view, many contemporary achievement goal theories conceptualize achievement goals as knowledge structures (Pintrich, 2000). These knowledge structures, even though often automatized are not sub-conscious in the way that a person could not be aware of the goals he or she has.

The process of goal formation according to the latter approach includes the cognitive functions of perceiving and interpreting the information one receives from the environment in the achievement situation, the beliefs one has about the world and the self (theories of intelligence, self-efficacy beliefs, attribution theories etc.) and the

emotional reactions that one experiences in the process (Boekaerts & Niemivirta 2005; Pintrich, 2000). As the people enter compulsory education, they encounter more and more achievement situations. The configuration of one's personal cognitive structures, beliefs about learning, the self and the situation and the emotional reactions over time become chronically accessible knowledge structures. This means that the preference for some achievement goals becomes "automatic" in that choosing one goal and acting accordingly evolves into a stable behavioral pattern. As these goals generalize, they become the personal standards (what am I supposed to accomplish in this situation, what are positive outcomes) against which a person evaluates his or her performance. In other words they become one's orientation.

In this work I will adopt the view that goals are chronically accessible knowledge structures that as they stabilize become dispositions of the person (Boekaerts et al., 2005). In a behavior level these dispositions form the person's general orientation he or she adopts in achievement situations. I will use the term achievement goal orientation that refers to general tendencies not to specific, situational goals.

Achievement goals have been studied in different levels of specificity, from situational goals to goal orientations (goals as dispositions) (for a review, see Pintrich, 2000). These differences are based on fundamental differences with regards to how the nature of achievement goals is understood. At the other end of spectrum is the view that goals are situational and affected by situational cues (Elliot et al., 1997). At the other end is the view of goals as dispositions. Achievement goal orientation theory that is adopted in the present work represents this approach. In this approach goals are seen as being based on personal dispositions, but also as dynamic and malleable in the way that the goal-structure of the environment can affect what goal is chosen. The effects of environment are understood in a dynamical way, in that the certain classroom goal-structures effect people differently depending on their ways to perceive and interpret the environment and on their personal achievement goal orientation (Pulkka & Niemivirta 2013; Ames & Archer 1988).

The last important issue of the conceptualization is whether goals are understood to be singular or multiple. Most of the studies focus on single goals in the way that a person

is considered to have only one goal at a time (Elliot et al., 1997). In the multiple goal research people are considered to have either many different, often contradicting goals in a situation or many goal tendencies. The achievement goal orientation research and more specifically the achievement goal orientation profile research that will be discussed later, belongs into the latter approach, in that it is interested in the configurations of the multiple goals that people have (Tuominen-Soini et al., 2008). Next I will move to discuss the operationalization and the methods used in the achievement goal research. Together with the theoretical considerations the methodological issues help to understand the problematics of studying and conceptualizing achievement goals.

1.2.2 Operationalization of achievement goal orientations

The methods the achievement goal research utilizes are based on the several differences that I have previously discussed. In the situational goal research (Harackiewicz et al., 1998) goals are often induced with biasing methods by creating a certain kind of goal situation with the help of verbal assignments. This however might not be an efficient way to produce specific motivational states. It has been suggested that mere verbal assignments do not induce motivational states, as the students' own motivational dispositions moderate the effects of biasing and that experimental manipulations need to cover a range of other situational cues (Niemi-virta 2002b).

The type of research described above is represents variable-centered research and it focuses on measuring single variables and their relations to other variables such as well-being or academic achievement (Bergman et al., 2003). The problem with this approach is the underlying assumption that people only have one goal at a time e.g. a person can be motivated to learn or to outperform others, but not both. A second problem is that the goal variables are assumed to be ergodic in the way that the goal works equally in all the people leading to similar outcomes.

There are many theoretical issues in choosing a method that is in line with the theoretical presumptions and is suitable for studying the research question. The situational goal research, even though it studies situation-specific goals, often claims

to study stable dispositions. It then aims to find causal connections between the situational goal and other outcomes such as well-being or achievement. The problem is, that if we want to make the argument that people with certain type of goals are for example more happy, we should know whether they always have this goal. Otherwise it is possible that the person happened to have a certain goal in the situation because the situation was for example manipulated, and that this artificial situation is not related to other long term subjective outcomes.

As opposed to the variable-centered approach the dispositional theory of multiple goals (most of the dispositional theories are not person-centered research: they do not study multiple goals) applies person-centered methods (Niemivirta, 2002b). It is assumed that people share the same goal tendencies but vary according to the level of these tendencies. One of the core assumptions is that causal relations between isolated variables do not capture the nature and functioning of a person. The psychological variables draw their meaning from their functioning in the totality of the system (Bergman et al., 2003).

Achievement goals are chronically accessible knowledge structures and people differ according to which structures are more easily activated in them than others (Pintrich, 2000). This assumption means that it is presumed that people share the same achievement goals, but differ in how strong or weak affect these goals have in the individuals' functioning. In person-centered research the focus is on finding homogenous groups that differ from each other according to the mean levels of goal orientations and where the members of a specific group share a similar kind of goal profile. (Niemivirta 2002b) This approach allows us to see how the combinations of goals produce different kinds of achievement and well-being outcomes.

In the person-centered research multiple goals do not mean infinitive amount of goals in the sense that there would be unlimited amount of configurations. Even though there are many unique cases that are impossible to categorize, most of the configurations of goals follow some lawfulness, in the way that certain goal configurations are more common than the others (Bergman & Andersson, 2010). In this approach the interest is in the typical (and atypical) functioning patterns, not causalities between isolated factors.

The question of whether to adopt a variable or a person-centered approach is also related to what is valued and what factors in school context are considered important and how do we see the learner. If the ultimate goal or value is high achievement, it makes sense that we aim to predict which separate factors produce academic success. If we are interested in understanding the person as a whole, of his or her learning and well-being, we ought to describe and explain how different goals are connected and how they (often in a non-linear manner) produce multiple achievement and well-being outcomes. Many variable centered approaches fail to reveal goal patterns with complex outcomes. For example, in the study of goal orientation profiles, it has been found, that many successful students despite of their highly adaptive profile, suffer from school burnout and have symptoms of depression (Tuominen-Soini et al., 2008). Only looking at single variables would not reveal this pattern. These students are high in mastery-extrinsic or performance-approach goals, which are not related by themselves to any maladaptive outcomes. When we look at the whole profile, we can see that these same students also display high levels of performance-avoidance and avoidance (which is not even included in some variable centered studies). This more complex picture would not be revealed if we would only consider single variables and not their configurations.

Next I will describe the person-centered model of achievement goal orientations adopted in this study. The aim of this approach is to reveal patterns of multiple goal orientations with different effects on achievement and well-being.

1.2.3 Patterns of multiple achievement goal orientations

In this study I will follow the person-centered approach, aimed at identifying different patterns of variables. I adopt the multiple goal perspective, developed by Niemivirta (2002b), where individuals are assumed to vary according to five different achievement goal orientations. These orientations include mastery-intrinsic (learning), mastery-extrinsic (absolute success), performance-approach (outperforming others), performance-avoidance (avoiding demonstration of lack of ability) and avoidance (avoidance of school-work). The model adopted here has been verified in several

studies. Depending on the target group and the number of the participants, 4-6 different homogenous groups with similar answering patterns (profiles) have been identified in previous research (Pulkka et al., 2013; Tuominen-Soini et al., 2008; Tapola & Niemivirta, 2008). The groups that have been identified in all most the previous studies are the learning oriented, the success oriented, the indifferent and the avoidance oriented. Other groups that have been found in some of the previous studies are the disengaged and the performance oriented (Tuominen-Soini et al., 2008; Tapola et al., 2008). The group names refer to the orientation that is the most predominant orientation of the group. However, only by looking at the scores in each motivational dimension, can we understand the way these groups approach achievement situations.

The research shows that these motivational profile groups are related to different outcomes with regards to achievement and subjective well-being (Tuominen-Soini, et al., 2012; Tuominen-Soini et al., 2008). The learning orientation is the most adaptive, as the group members emphasize intrinsic and extrinsic mastery but display low performance-avoidance and avoidance. This group seems to experience only low levels of stress, as it is not concerned with competition and social-comparison. The success oriented group consists of high-achievers who score high both in intrinsic- and extrinsic-mastery, but also in performance-approach, performance-avoidance and, surprisingly, in avoidance. This group has a potential risk of burn-out as they experience more stress about demonstrating ability in the eyes of others and getting good grades. This group typically displays low levels of self-esteem. The largest group usually found in the studies is the indifferent group, which does not display high emphasis on any of the dimensions. From the perspective of learning and academic achievement this group does not have an optimal orientation. On the other hand the group experiences only moderate level of stress and so their subjective well-being is at moderate level. The avoidance group represents the most maladaptive achievement goal orientation, as the performance-avoidance and the avoidance are the most predominant dimensions. The combination of fear of failure and the avoidance of schoolwork together make this orientation the most maladaptive with regards to achievement and subjective well-being. These students do not only underachieve in school, but they also experience problems with well-being and they display cynicism towards school and low levels of self-esteem.

In larger samples also two additional groups, the disengaged and the performance oriented one have been identified (Tuominen-Soini et al., 2008). The disengaged group shares a quite similar answering pattern with the avoidance group, in that they both display low levels of mastery and high levels of avoidance. The difference however between the two groups is that while the avoidance group has a high-level of performance-avoidance, (e.g. fear of failure), the disengaged group scores low in all the other scales, except in the avoidance, including the performance-avoidance one. The disengaged students do not display much interest in their schoolwork and they do not seem to worry about their performance in school. Although this orientation is maladaptive, it is related to rather low levels of stress, whereas the avoidance-oriented students orientation has negative effects on both performance and well-being.

The performance-oriented group, like the success-oriented group, also aims for high-achievement (Tuominen-Soini et al., 2008; Tapola et al., 2008). The difference between the two groups is that the performance oriented group places more emphasis on performance (social-comparison and competition) than the success-oriented group, and it scores higher on the avoidance dimension. The performance-oriented group thus has less favorable goal orientation profile than the success-oriented group.

1.2 Personal Goals

Personal goal research focuses on the personally set goals, projects and strivings that cover all the domains of life from work and studying to relationships and personal growth (Salmela-Aro, 2009; Little, 1989). In most of the personal goal approaches transitions and age-graded developmental tasks and demands are seen as crucial points in the development. Goals are seen as vehicles for directing the development and they play especially important role in different life transitions where different educational trajectories and life paths are chosen (Salmela-Aro & Nurmi, 1997a).

Personal goals form accumulative cycles meaning that the goals chosen in the past strengthen the tendency to choose similar kinds of goals later in life.

In personality psychology personal goals⁴ are defined as personal action constructs that reflect the personality (Little, 1999). In their social-ecological model Salmela-Aro and Little (2007) have proposed that “it is through personal projects that individuals gain coherence in their lives through balancing and juggling of internal and external influences that impinge them. These influences will change in nature and impact as the person ages, so that the social ecological model is in essence a model for life span developmental analysis.” Through personal goals it is possible to observe and get insight into the interplay between personality, action and the interaction with the environment and how these together shape individuals life-path.

Personal goal approach uses different methods depending on the focus of the study. The focus can be on goal content (Salmela-Aro et al., 1997) or on how different personal goals are appraised with regards to dimensions such as enjoyment, progress, stress and meaningfulness (Little, 1989). Both goal content and the appraisal dimensions are related to several well-being and achievement outcomes. In general positive appraisals and constructive goals and especially social goals are, according to studies, related to higher subjective well-being. Self-related, ruminative goals have been found to be maladaptive, in the way that people with these types of goals experience less progress and satisfaction with their goals, they fail more often to fulfill their age-graded tasks and they experience lower levels of well-being (Salmela-Aro et al., 1997a, Nurmi, Salmela-Aro & Aunola, 2009).

Findings from previous studies demonstrate that goals related to age-graded tasks are most adaptive as they are related to positive outcomes (Salmela-Aro et al., 1997). Having age-graded developmental goals also predicts having such goals in the later life. Normative development seems to work as an accumulative cycle (Nurmi, 2001) in the way that those who have large amount of positive goals will direct their life on a track that will later support forming more similar type of goals.

Previous research has shown non age-graded goals to be related to negative outcomes such as depression. Especially self-related non-age-graded goals seem to produce maladaptive patterns of behavior. Together the developmental transitions (going to

⁴ In Littles work the personal goals are referred to as personal projects.

secondary school, having a child etc.) and the age-graded and non-age-graded personal goals contribute to the formation of different life-paths. Nurmi (1989) has studied the development of future orientation that he describes as a part of normal successful development. Future orientation is highly influenced by the cultural life-span expectations. It could be that young people who have not been efficient in setting age-congruent goal, have not been able to develop future-orientation due to lack of knowledge about how to realize meaningful goals in the way that they respond to the cultural developmental demands. Future orientation framework emphasizes the interplay between cognitive processes and context. Future orientation develops as the person compares his or her abstract motives and values to the knowledge he or she has about future. Cultural knowledge about expected life-span development plays an important role when future-oriented motivation develops. After realizing the goals, one has to plan how to reach these goals. This includes setting subgoals, constructing plans and realizing these plans. One must also evaluate the realizability of the goals.

As we can see, personal goals are an integral part of development and depending on the personal configuration of cognitive and affective factors, on what knowledge one has about the possible goals one can choose from, about what kind of goals are beneficial and about how to reach these goals people through the accumulation of certain type of goals end up in adaptive and maladaptive life trajectories. More knowledge is needed about the social-psychological processes that direct the person to adopt certain kinds of goals as these goals might affect the achievement and subjective well-being in a longer term (Tuominen-Soini et al., 2011).

Both the person-centered dispositional achievement goal orientation research (Niemivirta, 2002b) and the personal goal research (Little, 1983) concentrate the person and his or her functioning as an integrated whole (Bergman et al., 2003). The unique configurations of goals and other factors construe the individuals' life-path. As both theories are concerned with the developmental pathways, it seems reasonable to consider these two goal constructs together. Both personal goals and achievement goals contribute to the development of an individual and the educational trajectories that he or she chooses. Previous findings both in personal goal research (Salmela-Aro & Nurmi 1997b) and in the person-centered achievement goal orientation research

(Tuominen-Soini et al., 2012) suggest goals to be related to the successfulness of educational transitions.

Goals work as vehicles for directing behavior and adjusting to the environmental demands. Recent studies (Tuominen-Soini et al., 2012) demonstrate that educational transitions are more successful for students with more adaptive achievement goal orientation profile than for those with more maladaptive profile. Of interest in the present study is the question whether personal goals are (inter)related with the achievement goals. If these two behavioral systems function in relation with each other, they might together play an important part in development and life transitions as people choose different paths based on their preferences, beliefs and abilities.

2. AIMS AND METHODS OF THE PRESENT STUDY

2.1 MAIN AIMS

The main objective of this research was to investigate the possible relations between achievement goal orientations and personal goals. Of interest here is the question whether achievement goal orientations have relevance beyond school achievement context, e.g. if they are related to goals in other life-domains as well.

Some general assumptions were made about the expected findings. Overall, it was proposed that students endorse multiple, even competing, goals simultaneously (Tuominen-Soini et al., 2012). Based on previous research (Nurmi, 2001) personal goals were expected to reflect age-graded development tasks (Havighurst 1953) typical for adolescents. It was expected that students with more adaptive achievement goal profile would also display more adaptive personal goals that are in line with the developmental demands, whereas students with less adaptive achievement goal profiles would in addition have less adaptive personal goals.

Previous research suggests that both achievement goal orientation (Tuominen-Soini et al., 2012) and personal goals (Salmela-Aro 2009) are related to successful adaptation to age-graded developmental demands. To date, the relations between the two concepts have not however been studied. Results from previous research demonstrate

stability in the dispositional achievement goal orientations, though also changes in the orientation group membership have been observed. The achievement goal orientation thus seems to be a rather stable disposition. However, till now, it has not been studied whether the achievement goal orientations might be related to goals beyond the school context.

In order to investigate the possible relations between the achievement goal orientations and personal goals, the following questions were formed:

1. What kind of achievement goal profiles can be identified among upper secondary school students?
2. What kind of personal goals do the students display?
3. How do students with different achievement goal orientation profiles differ with respect to their personal goals?

2.2 Participants and Procedure

The data were drawn from the Finnish Educational Transitions (FinEdu) Studies, a collaborative project by the Helsinki Collegium for Advanced Studies and the University of Jyväskylä (Finnish Educational Transitions (FinEdu) Studies, 2014). FinEdu is an ongoing follow-up study started in 2003, whose overall purpose is to investigate the educational transitions and choices of the youth with a special emphasis on the role of personal goals, motivation, and subjective well-being. 16-year-old upper secondary school students⁵ (n=1395) completed a self-report questionnaire measuring achievement goal orientations, personal goals and additional motivational indices. Questionnaires were administered to students in school during regular class sessions. Students were informed that participation in the study was voluntary. Students were assured that their responses were confidential and that only the researchers would have access to the data. Students were also informed that there were no right or wrong answers, but only statements reflecting their thoughts, attitudes, and behaviours. A written informed consent was obtained from the guardians of the participants.

⁵ The study included participants both from vocational school and high school. Due to the limited scope of the present study, the differences between the two groups will not be considered here.

2.3 MEASURES

2.3.1 Achievement goal orientations

Achievement goal orientations were measured with an instrument that distinguishes five achievement goal orientation scales (Niemivirta, 2002b): mastery-intrinsic, mastery- extrinsic, performance-approach, performance-avoidance, and avoidance. Each scale was comprised of three different items. The mastery-intrinsic scale assessed students' focus on learning, understanding, and gaining competence (e.g., "To acquire new knowledge is an important goal for me in school"). The scale for the *mastery-extrinsic orientation* focused on students' aspirations for getting good grades and succeeding in school (e.g., "It is important for me to get good grades"). The scale for the *performance-approach orientation* assessed students' focus on relative, social-comparison based judgments of ability and competence (e.g., "An important goal for me in school is to do better than the other students"). The scale for the *performance-avoidance orientation* assessed the avoidance of demonstrating incompetence (e.g., "I try to avoid situations in which I may fail or make mistakes"). The scale for avoidance orientation focused on students' desire to avoid schoolwork and minimize effort (e.g., "I try to get away with as little effort as possible in my school work"). Students rated all items using a 7-point Likert-type scale ranging from 1 (*Not true at all*) to 7 (*Very true*). Composite scores were computed separately for the five orientations.

2.3.2 Personal Project Analysis

Personal Project Analysis (PPA). The participants filled in a revised version⁶ of Little's 1983 Personal Project Analysis inventory. The participants were asked to list four of their current personal projects in response to the following instruction: "People have different kinds of important goals, projects, and intentions. These

⁶ In the original Personal Project Analysis the inventory includes a section where the participant evaluates the listed goals in several different appraisal scales that measure things such as progress, enjoyment and meaningfulness.

personal goals may include different life areas like school, friends, family, work, studying, dating, health, one's own parents, wealth and use of money, travelling, self or hobbies. List now four of your current personal projects in the four lines below”.

2.4 Analytical approach: Person-centered approach

To date, most of the research focusing on achievement goals has adopted a variable-centered approach (see for example Dweck et al., 2003; Elliot et al., 1997). The important difference is however, that these studies have mainly concentrated on task-specific goals (achievement goals) and not on the more stable, achievement goals (achievement goal orientations). As in the task-specific goal research the goals are induced by manipulations that intend to promote certain specific goals, the focus is on these induced goals and on the possible connections between these and some other variables. In the dispositional approach the goals are thought to be a disposition of the person, not the situation (although the person-centered line of research acknowledges the interactions and the reciprocity between the environment and the person and temporal-stable dimension of the motivational processes). It has often been noted that the situational and dispositional views do not need to exclude one and other, but rather, they are complementary (Niemivirta, 2002a). Recent research has for example studied the interactions between situational and dispositional factors on motivation (Tapola et al., 2008; Tapola, Jaakkola & Niemivirta, in press).

In this research I adopt the person-centered approach, in which the person-level patterns of variables are of interest (Bergman et al., 2010). This means that the focus is on the interaction of variables within an individual. To understand the meaning a variable has for the functioning of a person, we must look at the role the variable plays in the functioning whole.

The adopted approach affects in an important way the adoption of analytical methods. The motivation research has traditionally used variable-centered methods, e.g. methods analyzing relations between observable variables. Followed by the logic inherent in person-centered approach I will utilize analytical tools designed for examining unobservable relationships between observable variables, in other words,

latent variables. Of interest is the unobserved hetero- and homogeneity. In case of homogeneity, we are interested to find homogenous subgroups from the study sample. The notion of heterogeneity is important, and becomes clear if we consider the example of success-oriented and mastery students. As previous research shows (Tuominen-Soini et al., 2008), if we adopt variable-centered approach and take a look at how the success and mastery-oriented students score on the mastery-dimensions, we would interpret the students as mastery oriented. By adopting person-centered approach, we reveal latent dependencies and relations between multiple variables, and reveal the unobservable heterogeneity among these students. In other words, person-centered analysis can reveal important differences between individuals that the variable-centered methods cannot.

Although the person-centered approach aims to reveal individual patterns of variables (how variables interact in the within-individual level), it is not completely idiosyncratic approach. It is assumed that even though there exists differences between individuals in the patterning of variables, some patterns are more likely than others (Bergman et al., 2010).

2.5 ANALYSIS

2.5.1 Confirmatory Factor Analysis

The instrument for measuring the five distinct achievement goal orientation scales (Niemi-virta 2002b) has been used in several studies showing high reliability and validity. The structural validity of the goal orientation scales was assessed by using Confirmatory Factor Analysis (CFA) with the Mplus statistics software (Muthén & Muthén 1998–2009). CFA is a hypothesis driven analytical tool, which requires the researcher to have a firm a priori sense, based on past research, of which items form each of the factors. It is used to examine the latent structure of the given test instrument (questionnaire) and for verifying the number of underlying dimensions of the instrument/phenomenon and the pattern of the item-factor relationship. Since the validity of the instrument has been verified several times in previous studies Exploratory Factor Analysis (an analytical tool for identifying the factors, when no a

priori assumptions cannot be made about the structure and the number factors) was considered unnecessary and CFA was performed instead (Brown, 2006)

As recommended in the literature, following indices were used to evaluate the overall model fit: Comparative Fit Index (CFI; Bentler, 1990) with a cutoff value of $>.95$, the root mean square error of approximation (RMSEA; Steiger, 1990) with a cutoff value of $<.06$, and the standardized root mean square residual (SRMR; Hu & Bentler, 1998) with a cutoff value of $<.09$.

2.5.2 Latent Class Clustering Analysis

Latent Class Clustering Analysis (LCCA) is an analytical tool used to identify homogeneous subgroups in the total population (Vermunt & Magidson, 2002). Like in Factor Analysis, in LCCA it is assumed that in the total sample the latent class variable is the only thing that causes the observed variables to be related to each other.

Clustering methods have often been criticized for their uncertainty as the number of clusters depends on the a priori deduction of the researcher. LCCA differs from the traditional methods in that it is a model-based method that has the advantage of many additional test of model-fit (Vermunt et al., 2002). In addition it has the advantage that no decisions have to be made about the scaling of the observed variables and the used variables maybe continuous, nominal, ordinal, count, or any combination of these.

In this study I will use Bayesian information criteria (BIC) to estimate the optimal number of classes (Vermunth et al., 2002). A model with a lower BIC value is preferred over a model with a higher BIC value.

2.5.3 Personal Project Analysis

The participants listed four of their current personal projects. Each project mentioned by the participants was content analyzed independently by two assessors into 18

different classes⁷. The collected data has been categorized previously in Elina Martinens (née Riuttala) study (2006; Marttinen & Salmela-Aro, 2012), and thus the analysis and the categorization process follow her line of work. After the pre-categorization, for the purposes of this study, categories tapping on similar themes were included into larger subcategories. Categories with less than 100 mentions by the participants that could not be included to any larger groups, were excluded from further analysis, leaving 13 project categories to the final analysis.

2.5.3 Between-Group analysis with one-way ANOVA

Between-group differences with regards to the personal goals were examined with SPSS statistical software by conducting a series of analyses of variance (ANOVAs) based on goal orientation group memberships. A pairwise comparison of the scores was performed for the personal goal classes that showed between-groups variance at a statistically significant level.

3. RESULTS

3.1 Confirmatory Factor Analysis

The model-fit was evaluated based on the scores on the following goodness-of-fit indexes: CFI .93, RMSEA .07 and SRMR .05 (all solutions were generated using maximum likelihood (ML) estimation). All indexes indicated a good fit for the proposed structure of the scales.

The CFA mode fit the data well, indicating the structural validity of achievement goal orientations, and thus, based on the model, composite scores were constructed for each scale, and the resulting five variables were labelled as (1) mastery-intrinsic, (2)

⁷ I did not participate in the preliminary content analysis as the data has been analysed for the purposes of previous studies as a part of the ongoing FinEdu project.

mastery-extrinsic, (3) performance-approach, (4) performance-avoidance, and (5) avoidance. The Cronbach alpha reliabilities (see table 1.) for the five scales were .85 for the mastery-intrinsic orientation; .84 for the mastery-extrinsic orientation; .71 for the performance-approach orientation; .81 for the performance-avoidance orientation; and .75 for the avoidance orientation.

3.2 Descriptive statistics: correlations between orientations

Regarding achievement goal orientations, correlations revealed theoretically consistent interrelationships (see table 1). First, the mastery-intrinsic and mastery-extrinsic orientations were positively correlated. Also, the performance-approach and performance-avoidance orientations were positively related to each other. As expected, also performance-avoidance and avoidance were positively related. Both the mastery-intrinsic and mastery-extrinsic orientations were negatively related to the avoidance orientation.

3.3 Achievement goal orientation profiles and grouping

Results from the LCCA indicated that according to the BIC-criterion the solution with five groups explained the data best (see Table 2). Thus five homogeneous groups of students were identified based on their achievement goal orientation profiles. The identified groups, following previous research (Tuominen-Soini et al., 2008; Tuominen-Soini et al., 2012), were named as *learning-oriented*, *success-oriented*, *indifferent*, *performance-avoidance-oriented* and *avoidance-oriented* (see table 3).

As we can see from table 3., the indifferent group scores somewhat low in all the scales. Thus. the group was named “*Indifferent*” as the group members do not display strong orientation towards any direction. Two of the more adaptive profiles, namely, the learning and the success-oriented groups score high on both of the mastery-dimensions, which are considered beneficial with regards to the achievement. The difference between the two groups is that while the learning oriented mainly focus on mastery-intrinsic (learning) goals, the success-oriented accentuate also goals related to relative and absolute success. Both of the last two of the identified groups, the avoidance and performance-avoidance oriented group displayed rather strong

tendency towards avoidance. The performance-avoidance group scored high on both of the performance dimensions and in the avoidance dimension, and was thus named as the performance-avoidance oriented group. The avoidance-oriented group had relatively highest score in avoidance when compared to the other groups, and was therefore named after this orientation.

Table 1. Descriptive statistics, alphas, and zero-order correlations for goal orientation scales.

Variable	M	SD	α	1	2	3	4	5
Mastery-intrinsic	5.28	1.15	.85	-				
Mastery-extrinsic	5.40	1.14	.84	.63*	-			
Performance-approach	3.78	1.33	.71	.15*	.35*	-		
Performance-avoidance	3.63	1.43	.81	-.04	.13*	.47*	-	
Avoidance	4.23	1.32	.75	-.30*	-.19*	.13*	.26*	-

Note: * $p < .001$.

Table 2. Bayesian information criterion values for different group solutions.

Number of groups	BIC
1 group	22444,7113
2 groups	21809,6647
3 groups	21413,6091
4 groups	21352,0771
5 groups	21270,6977*
6 groups	21280,6408

*Lowest BIC value indicates the best model-fit.

Table 3. Mean differences in goal orientations between achievement goal profiles

	Indifferent n=447		Learning n=138		Success n=206		Performance- avoidance n=192		Avoidance n=412		F	p	η^2
Scale	M	SD	M	SD	M	SD	M	SD	M	SD			
Mastery- intrinsic	5.51	.67	6.77	.35	6.41	.54	4.95	.80	4.12	.85	578.367	<.001	.63
Mastery- extrinsic	5.51	.67	6.41	.50	6.68	.35	5.89	.67	4.10	.78	714.579	<.001	.67
Performance- approach	3.46	1.07	2.76	1.18	5.16	.98	4.99	.92	3.22	1.02	229.778	<.001	.40
Performance- avoidance	3.18	1.15	2.09	.97	4.55	1.37	5.08	.87	3.50	1.24	184.939	<.001	.35
Avoidance	3.91	1.13	2.80	1.18	3.99	1.28	5.34	.87	4.67	1.14	127.457	<.001	.27

3.3 Personal Goals

After the content analysis, following personal goal/project categories were formed: present education (21%), work/occupation (15%), relationships/marriage/having children (10%), health (9%), hobbies/free time (9%), friends and family (8%), money/property (8%), life style (6%), future education (5%), travelling (3%), moving (3%), and self-related negative goals (3%). The goal categories and examples of the goals included in the categories are presented in table 3. Since the aim was to investigate whether there would be observable between-group differences according to how often each of the 13 goal types were mentioned (e.g. whether students belonging to one profile listed significantly more or less goals falling into one specific goal class than other profile groups), the string variables (e.g. the personal goals) were converted into count-variables in order to make the further variance analysis (ANOVA) possible. The measurement scale for the count-variables is 0-4, 0 indicating zero mentions of goals in a given category and 4 meaning that all the listed goals of a student belonged to the same content category.

3.4 Between-group differences according to the personal goals

After controlling for the effect of gender there were few statistically significant differences between the groups (see Table 4). The personal goals where significant differences between groups were found were *present education*, *future education* and *work/occupation*⁸.

In order to see what groups differed from each other according to the personal goals related to present education, future education and work/occupation, a pairwise comparison was performed. Based on the Levene's test, equal variances could not be assumed for any of the goal variables due to which the Games-Howell correction was applied for pairwise comparisons for all the variables. In goals related to *present education*, there were significant differences ($p=.008$, $p<.05$ indicating variance at a statistically significant level) between the indifferent ($M=.72$) and the avoidance oriented groups ($M=.59$) and in *future education related goals* the statistically significant difference ($p=.005$) was between the avoidance oriented ($M=.13$) and the learning oriented group ($M=.28$). In work/occupational goals there were significant differences between the avoidance oriented ($M=.42$) and the learning oriented group ($M=.63$; $p=.004$) and between the performance-avoidance ($M=.39$) and the learning oriented group ($p=.035$).

⁸ Due to the unequal frequencies of personal goals in the goal orientation profiles, a non-parametric Kruskal-Wallis one-way analysis of variance was also applied in the analysis. The test results were somewhat in line with the results from the variance analysis. It is however not possible to add covariates in Kruskal-Wallis test, and therefor the effect of gender could not be eliminated from the non-parametric analysis. The results need to be therefor interpreted with caution.

Table 4. Personal Goal Categories and frequencies summed from the four-goal elicitation list.

Personal Goal Category	Example of a goal belonging to the category	Number of times mentioned (Total 100%)
Present education	graduate/do well in high school/vocational school	951 (21%)
Work/Occupation	get a good job, get an enjoyable job	665 (15%)
Relationship/marriage/having children	to get a girl/boyfriend, getting married, having children	450 (10%)
Health	taking care of your health, physical activity, getting older	423 (9%)
Hobbies/free time	exercising, playing with computer, get a pet, holiday	418 (9%)
Relations to friends and family	parents, relatives, siblings, friends	383 (8%)
Money/property	money, apartment, getting a loan	359 (8%)
Life style	living a good life, being successful, life situation, happy life, become happy	263 (6%)
Future education	Getting to university, applied sciences school, continuing studying after secondary school	247 (5%)
Travelling	travelling, going to study/work abroad	150 (3%)
Moving	moving to live on your own, moving to a new location	133 (3%)
Self-related (negative) goals	personal development, independence, stress, burnout, finding balance, loneliness	127 (3%)

Table 5. Variance between groups according to the personal goals after controlling for gender.

Personal Goal	Indiff.		Learning		Success		Perf-avoid.		Avoidance				
Scale	M	SD	M	SD	M	SD	M	SD	M	SD	F	p	η^2
Present education	.72	.57	.71	.57	.71	.55	.70	.65	.59	.53	2.639	.032	.008
Work/ Occupation	.48	.57	.63	.62	.52	.59	.44	.54	.42	.53	4.128	.002	.012
Relationship, marriage, children	.31	.49	.36	.54	.35	.48	.39	.52	.28	.48	2.017	.090	.006
Health	.33	.49	.26	.46	.31	.47	.35	.52	.27	.46	1.777	.131	.005
Hobbies/free time	.29	.52	.20	.43	.31	.56	.31	.54	.34	.65	1.094	.358	.003
Relations to friends and family	.33	.55	.28	.54	.30	.50	.22	.43	.22	.47	1.759	.135	.005
Money/ property	.25	.48	.25	.50	.20	.46	.28	.52	.29	.57	.713	.583	.002
Life style	.19	.46	.21	.50	.18	.47	.20	.45	.17	.44	.143	.966	.000
Future education	.18	.40	.28	.48	.20	.41	.17	.38	.13	.35	4.414	.002	.013
Travelling	.12	.34	.17	.34	.10	.30	.08	.30	.09	.28	1.518	.194	.004
Moving	.10	.30	.03	.19	.10	.29	.12	.32	.10	.31	1.967	.097	.006
Self-related negative	.07	.26	.08	.27	.10	.40	.09	.30	.11	.32	1.239	.292	.004

Due to unequal variances, Games-Howell correction instead of Bonferroni was applied for the variables.

4. DISCUSSION

4.1 Main findings

The main aims of this study was to examine what kind of achievement goal orientation groups can be identified from the research sample and how these groups differ from each other with respect to their personal goals. I will first describe the main features that characterize the identified groups. The groups were named according to their most central goal. Second, I will describe the personal goals. Last, I will describe the between-groups-differences according to the personal goals found in the analysis and discuss how the results should be interpreted.

4.2 Profiles

Next, I will describe each of the identified achievement goal groups (see figure 1.). I will first focus on the so-called “neutral” group, comprising of the majority of the students. Second, I will describe the two most maladaptive profiles. Maladaptive refers here to the kind of motivational profile that is detrimental both to school achievement and subjective well-being of the individual. Last, I concentrate on two the most adaptive profiles, which are inclined to show positive patterns of school success and subjective well-being. The group names follow previous research where similar profiles have been identified (Tapola et al., 2008; Tuominen-Soini et al., 2012).

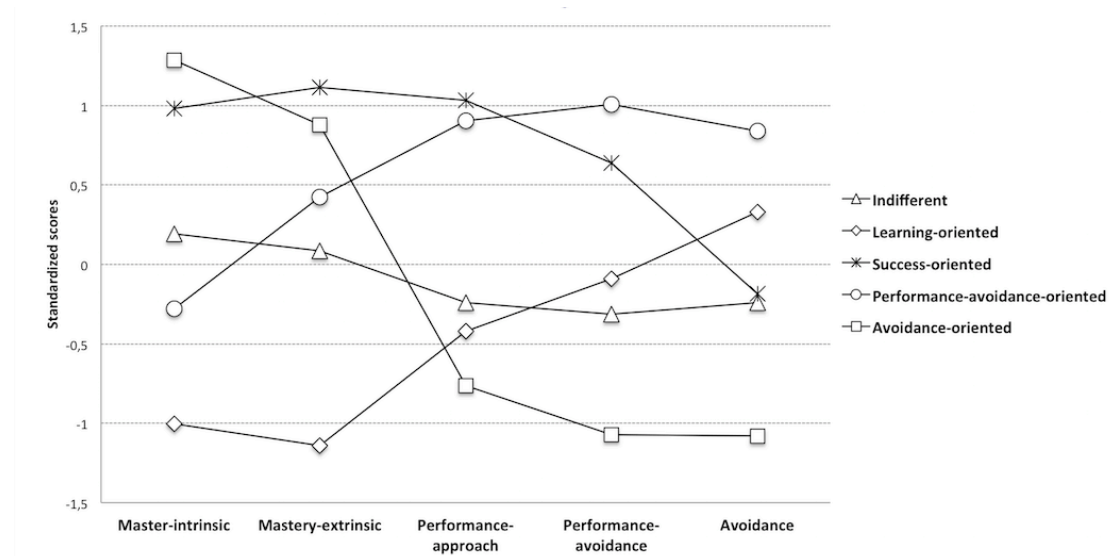


Figure 1. Achievement goal orientation profiles.

4.2.1 The Neutral Profile: indifferent group

The Indifferent group was the largest of the identified five groups, and consisted of 447 students (32%). The groups' profile reflects the "average students" orientation towards schoolwork. The group does not emphasize any of the dimensions and as can be seen from figure 1., the groups' profile is rather flat. They do, however, score slightly higher in scales measuring mastery-intrinsic and mastery-extrinsic goal orientations compared to the other scales, which could be interpreted in the way that they do acknowledge the importance of learning and achieving in the school context. Despite the "lack of enthusiasm", the rather low scores in performance-avoidance and avoidance and slightly stronger emphasis in learning make this profile more adaptive (e.g. more optimal) than the disengaged and the avoidance profiles.

4.2.2 The Maladaptive Profiles: performance-avoidance-oriented and avoidance-oriented groups

The second largest group (29,5%) consisted of 412 students characterized by a rather maladaptive profile. The group expressed very low interest in schoolwork as they had the lowest scores on mastery-intrinsic and extrinsic-scales and relatively highest score on the avoidance dimension and thus was named as the "*avoidance-oriented*" group. Another, rather maladaptive profile found in the analysis was the "*performance-*

avoidance”⁹ oriented group consisting of 192 students (13,7%). Unlike the avoidance-oriented, this group scores rather high in mastery-extrinsic scale and also slightly higher at the mastery-intrinsic scale. The group also scores highest in both of the performance scales (approach/avoidance).

Both profiles, though in different ways, have their disadvantages, and are thus considered maladaptive. The avoidance-oriented have relatively the highest score in avoidance scale. It seems that the groups’ most dominant goal in school is to mainly avoid schoolwork. The performance-avoidance oriented display more interest in schoolwork than the avoidance-oriented, but they seem to be driven by social comparison and they are motivated more by the demonstration of ability, rather than learning. The disadvantage of this profile is that the group also scores high in performance-avoidance and avoidance scales. It might be, that the stress on social-comparison causes this group also to display fear of public failure and to disengage from schoolwork.

It is important to note here, that the “adaptiveness” here does not only refer to high achievement in school, but the overall well-being in the school context, which in turn contributes to the success in school. Performance-avoidance and avoidance are not only indicators of schoolwork avoidance, but they are also related to low self-esteem, cynicism and other things deleterious for the students’ self-image and attitude towards school (Tuominen-Soini et al., 2012).

4.2.3 The Adaptive Profiles: success and learning oriented groups

The last two groups, *the learning- and the success-oriented* groups are considered here as the most adaptive profiles, as the emphasis on intrinsic and extrinsic mastery is the most predominant feature of these groups. However, there are important differences between the two groups. As noted with the maladaptive profiles, also in the more adaptive profiles, the differences become clear only if we look at the score

⁹ Similar profile has been described in previous studies but with the label “performance-oriented” (Tuominen-Soini et al, 2008). I chose to use the term “performance-avoidance-oriented” in order to highlight the groups tendency to both accentuate social comparison and to avoid school work.

differences in the performance-avoidance and avoidance scales. The success-oriented students are not only concerned with the absolute success, but they also emphasize the social aspect in their preference for achievement goal. This means on the other hand high competitiveness (performance-approach) but also heighten fear of public failure. Previous studies have demonstrated how concerns with social comparison are deleterious for subjective well-being and achievement. They not only are harmful for the self-esteem and the sense of self-efficacy but also might intrude in to learning and self-regulation processes as the student aims to protect him- or her self from possible failure rather than to focus on the learning task (Pintrich & Ruohotie, 2000; Boekaerts et al., 2005).

The comparison between the learning and success-oriented groups gives support for the five goal orientation construct (Niemivirta, 2002b) and reveals the importance of the differentiation between different forms of ability conceptualizations. It is not the extrinsic motivation in it self that makes the success orientation less adaptive but the competitive, social goals. The differentiation between absolute (formal evaluation such as grades) and relative (competence compared to others) success gives insight into why success oriented students on the other hand achieve better in school than the learning oriented but on the other hand suffer more from burn-out and low self-esteem (Tuominen-Soini et al., 2012). The separation between extrinsic-mastery goals and performance-approach goals makes questionable the common assumption that extrinsic goals would lead to lower achievement or lower enjoyment (Vansteenkiste, Lens & Deci, 2006). In conclusion, together with the observed outcomes in previous studies the five goal dimensions (mastery-extrinsic, mastery-intrinsic, performance-approach, performance-avoidance, avoidance) and the identified profiles draw a comprehensible and meaningful picture of the different patterns of interactions between goal strivings, achievement and well-being.

4.3 Personal goals

The results showed that the typical adolescent developmental tasks appear in the generated personal projects. As was expected, the most common goals were related to education and work. The list of personal goals (see Table 4.) demonstrates how the

age-graded developmental tasks play an important part in adolescents' lives. A positive finding was that even though some students displayed rather maladaptive achievement goal patterns, there did not appear to be much difference between groups according to their personal goals. All the groups listed personal goals that can be considered as contributing to the fulfillment of age-graded developmental tasks (Havighurst, 1953). The maladaptive groups mentioned slightly more self-related negative goals than the other groups, but the differences between groups were not statistically significant, and the overall amount of this type of goals was low (3%).

4.4 The between group differences

After controlling for the effect of gender there were few statistically significant differences between the groups. The personal goals where significant differences between groups were found were goals related to *present education*, *future education* and *work/occupation*. In *present education*, there were significant differences between the indifferent ($M=.72$) and the avoidance group ($M=.59$) and in *future education* the significant difference was between the avoidance ($M=.13$) and the learning group ($M=.28$). In *work/occupation* there were significant differences between the avoidance (.42) and the learning group (.63) and between the performance-avoidance (.39) and the learning group.

The results in the between-groups comparison regarding the present education are in line with the profiles, as the avoidance-oriented students who score the lowest in intrinsic- and extrinsic-mastery scales also display lowest level of study related personal goals. Interestingly it is not the success- or the learning-oriented group that displays highest interest in study goals, but the “neutral”, indifferent group. As I described earlier, for the indifferent, despite of their lack of interest in schoolwork, the orientations towards learning is the predominant factor of this group even though the mean scores for intrinsic and extrinsic mastery are rather low. This emphasis could explain why this group has more personal goals related to the present education than the other groups. It could also be, that school work might appear more salient for this group as the importance of studying is acknowledged but at the same time the students might experience problems in studying due to a lack of interest and

persistence. However, it should be noted here that there was not much difference in the mean scores regarding the study related goals between the indifferent, the learning- and success-oriented and the performance-avoidance oriented groups. An important finding which should be acknowledged here is that the avoidance group listed almost as much as goals related to the present education as the more adaptive groups, even though the group scores rather low in the intrinsic and extrinsic mastery and despite the fact that, according several studies, their actual achievement in school is poor (Tuominen-Soini et al., 2011).

The differences between groups with regards to the future education and future work/occupation goals are also in line with the prior expectations. Whereas the learning oriented groups' personal goals indicate high interest in future education and occupation, the more maladaptive groups, the avoidance oriented and the performance-avoidance oriented ones, have significantly lower interest in these type of goals. All of the profile groups displayed low mean scores in personal goals related to future education (see table 5.). This could also be due to the fact that these students are in the beginning of their secondary school studies. Perhaps different results with regards to the future education goals could be attained with students that are closer to graduation.

The present findings complement the achievement goal theory in a meaningful and coherent way. Previous research has indicated a possible relation between achievement goal orientations and personal goals and the present findings give us more reason to assume that such a connection might exist. In her work, Tuominen-Soini and her colleagues (2008) found that the success and learning oriented students appraised their personal study-related goals in more positive terms. These students reported relatively high levels of commitment, effort, and progress in relation to their educational goals. The students with more maladaptive profiles displayed relatively low levels of commitment, effort, progress, and stress with respect to their educational goals.

The previous findings and the results from the present study draw a picture of a highly adaptive student, whose' approach to achievement situations sets a positive cycle in motion. It seems as though the learning and success-orientation towards achievement

leads to a more future-oriented mind-set. As these students tend to persist on the task even when facing challenges, they also tend to experience more progress in their goal attainment and eventually to attain their aspirations. The present results together with the ones from Tuominen-Soinis and colleagues' (2008) studies indicate a possibility that achievement goal orientations might have effects beyond the school context. If the achievement goal orientations are in fact related to the way the youth chooses and pursues their personal goals, and eventually to the formation of different developmental pathways of life, then information and awareness of these orientations might have potentially important practical implications in school.

It has been suggested also, that the youth with more coherent and well-established career identities display higher well-being and the transition from adolescence to adulthood is easier for these individuals (Malanchuk, Messersmith & Eccles 2010). A well-established, coherent career identity includes the strong desire for certain career path but also the ability to plan and set goals that help to reach the desired career and establish it as a solid part of identity. It is plausible, that the students with more adaptive achievement goal profiles would, through better self-regulation, display more coherent career identities with clear plans and personal goals.

As we can see the important difference between the “neutral”, the adaptive and maladaptive groups appear also in the temporal dimension of goals. The students in the more adaptive achievement goal orientation groups, concentrate on future-related goals whereas the neutral average groups' goals focus on the present goals. Differences with regards to future-orientation might lead the young people to different life-trajectories (for a review see for example Salmela-Aro, 2009).

I will now in the following sections refer to *career goals*, when I discuss about the future education and the future work- related goals. I understand here career as development trajectory consisting of a complex set of decisions concerning education and career (see for example Nurmi & Salmela-Aro, 2002). Goals that are related to the present education are referred to as *school goals*. The major difference between the two types of goals is in the temporal dimension: the school goals are related to the present or to the near future (before finishing the upper secondary school) whereas the

career goals are related to future education and work that together contribute to the future life-paths.

4.5 Theoretical considerations

The variation between groups with regards to school related goals is an expected finding and in line with the profile differences. However, it raises a question whether school related goals just represent achievement goal orientations in a different way, e.g. they are articulated spontaneously by the students. A finding, important in it self, here, is that the school related goals, are also, without prompting, considered as important personal goals. Even the avoidance-oriented students, despite their the lack of interest in schoolwork, still consider school related personal goals as the most important goals. This notion should be considered when we investigate the reasons for maladaptive achievement behavior. We ought to not judge these young people too quickly as indifferent and rather reframe the questions as “ why do some young people display motivational problems despite the personal interest they have for their education?” The finding that even maladaptive students endorse school related goals to some extent, gives further support for the multiple achievement goal orientation theory, as the reasons for motivational problems lie in the configuration of adaptive and maladaptive goals.

In light of the achievement goal theory and the present findings, the career goals present a potential key in understanding how achievement goal orientations might be connected to development and adaptation in later life. The present findings give support for the assumption that students with more adaptive achievement goal orientation are also more concerned with their future careers. This consciousness might help these students to construct learning goals, which they find personally meaningful. For example Bandura and Schunk (1981) have suggested, that the ability to form meaningful future goals and to transform them into sub-goals (for example achievement goals in the classroom) is the key for motivation to learn and for pursuing future goals successfully. If the students’ achievement goal orientation is in line with his or her future aspirations, then this might have positive long-term effects on career development and the life-course.

Above I discussed the issue of how the students with less adaptive profile seem to endorse school related goals (although significantly less than other groups), but this interest is not realized in the actual goals in the achievement situations. The students with maladaptive profiles seem also somewhat indifferent with regards to their future careers. One important difference between different achievement goal orientation groups is the way they self-regulate their learning (Boekaerts et al., 2005). The goals students set for them selves play an important role in how the students manage their learning process. Thus, the interaction of achievement goal orientations and self-regulation together generate different patterns of achievement behavior.

Next, I am going to discuss the possible mechanisms connecting achievement goal orientations and personal goals. I propose here that perhaps the reason why the maladaptive students fail to realize their (prevailing) study goals in the domain of present and future education is due to problems in self-regulation. I further suggest that the self-regulation abilities might have a transfer effect on other goal domains. Those with good self-regulatory skills can utilize this competence in other life-areas as they construe their life-paths. Thus, the between-groups differences in career goals could be due to the differences in self-regulatory skills. In a longer run these differences might lead to the development of different life-paths with different well-being and achievement outcomes.

One notion that should be made here is that it is not a tautology when we discuss about the personal study related goals in the achievement goal framework. This here means that personal study goals are not considered as the same thing as achievement goals. Every student has achievement goals (that are in line with the achievement goal orientation) but not necessarily personal study goals. Achievement goals are, in a way, a coping reaction in response to the perceived demands. Further more, study goals belong to the personal goal domain, meaning that they “fight” for their place in the personal goal system with other goals (on personal goal systems, see Little 1989). In other words the personal goal system might include several different types of goals, and these goals need to be orchestrated in concordance with each other.

One possibility is that the ability to manage the learning process translates to ability to manage personal goal system, where multiple goals need to be managed often simultaneously. The harmony of the system, and meaningfulness and enjoyment found in the endorsed goals are related to the capability of setting new adaptive goals in the future life and the subjective well-being (Little 1989; Salmela-Aro, 2009).

There are several studies that show how the achievement goal orientations are related to self-regulation of learning (Pintrich et al., 2000; Boekaerts et al., 2005). The students with more adaptive orientations seem to also regulate their learning process more efficiently, whereas the students with less adaptive orientations display problems with self-regulation. The management of personal goals has also been explained in similar terms. Next, I will describe the theory of self-regulated learning and self-regulation of personal goals in more detail, in order to demonstrate how achievement goal orientations and personal goals might be connected through self-regulation. My intention here is to draw a picture of an integrative framework, where the goal systems and processes are considered from the perspective of the functioning whole.

4.5.1 Self-regulation

“In its common usage, “regulation” refers to a process in which a system is brought into compliance with a standard. When the system is “self-regulating”, the system is assumed to contain two additional components beyond the standard. These two elements are a mechanism for detecting deviation from the standard, and a mechanism for bringing a system back from deviation toward the standard. Many human systems are expected to become self-regulating in the course of development. These systems include control of emotions, reactions to failure and disappointment and most forms of moral and achievement activities. Indeed, when certain systems fail to show self-regulation, it is often assumed that normal development has been disrupted.” (Tobin & Graziano 2006, 263)

In short, self-regulation in a learning context can be described as comprising of cognitive, volitional and affective aspects (Pintrich et al., 2000). Cognitive processes

include metacognitive processes such as self-monitoring ones progress and choosing different strategies. Unlike models that focus only on the information processing, self-regulation theories include also affective and volitional processes in the model. Achievement situations do not only trigger cognitive reaction but also affective reactions. Depending how the situation is perceived and interpreted and how comfortable one feels about chances of success, the situation can induce positive or negative affective reactions. To proceed with goal pursuit, one must be able to control these emotional reactions. In order to do this, volitional control is needed (Husman & Corno, 2010). This refers to the control of affect and motivation. Volition means purposive striving and it includes the processes that maintain motivation during goal striving. This can include for example self-talk (“you can do it”), giving oneself extrinsic rewards and making the task more interesting (Pintrich, 2004). Volition is the effortful control exerted in order to delay gratification (Husman et al., 2010). There are individual differences in effortful control, some of which possibly originate from early childhood experiences or genetic factors such as temperament. (Hoyle, 2006). Besides controlling motivation, a student has to manage his or her emotional states as well. For example anxiety is a typical emotional distraction and students ability to manage this anxiety is critical for managing the self-regulation process (Husman et al., 2010). Self-regulation is especially needed in the face of a failure and being able to continue pursuing the achievement goal depends on the students’ ability to manage the emotions that these setbacks trigger.

Including emotions in to self-regulation opens up new dimensions into understanding how different dynamics work in self-regulation process, and what are the reasons for a student to use different kinds of self-regulation strategies. In Boekaerts (1996) Model of Adaptable Learning it is the emotional regulation that plays important part in self-regulation. According to Boekaerts self-regulation model, a student first by perceiving and interpreting the achievement situation and by activating his or her previous experiences, beliefs and available cognitive resources, form an internal working model of the situation. This working model then guides the student in choosing an achievement goal. If the situation is appraised as an opportunity to enhance ones skills, a student consequently focuses his or her attention and energy to activities that help to achieve the learning goal. This involves high quality cognitive strategies, self-monitoring and planning. If the situation is appraised negatively and

an avoidance goal is adopted, a student aims mainly to protect his or her ego and to restore well-being. The first approach focuses on increasing the personal resources whereas the latter focuses on preserving them. These two approaches lead in to forming two different forms of self-regulation. The first is the mastery mode, where the focus is on planning, monitoring and evaluating and redirecting action. In the second one, coping/well-being mode, the main purpose is to avoid possible threats to self-esteem. These two self-regulation modes differ in the way situation and the environment, the feedback and the failures and successes are interpreted and experienced. As can be expected, the mastery mode is adaptive and related to achievement and well-being whereas the coping mode is detrimental both to achievement and well-being. Coping mode leads often in to adopting ineffective strategies such as self-handicapping (purposefully neglecting homework in order to avoid self-directed lack of ability-attributions; see for example Midgley & Urdan, 2001; Urdan, 2004). Students may generalize either one of these patterns to all situations that they see as functionally equal, leading to maladaptive and adaptive patterns of self-regulation. These generalizations become chronically accessible knowledge structures that are triggered over and over again in the course of studying (Boekaerts et al., 2005). They work as two distinct interpretative frameworks through which students assign meaning to learning situations and to different learning outcomes

The important difference between the two modes of self-regulation is that in the other the focus is on the task whereas in the other the self is the main interest. Pintrich (2000) has suggested, that students who protect the ego are unable to use their cognitive resources efficiently because their attention is focused in the self-relevant features of the situation. It is then more maybe the direction, not the amount or quality of cognitive resources that presents the obstacle for effective self-regulation and learning.

Like Boekarts (1996) Model of Adaptable Learning, the life-span theory of control (Wrosch, Heckhause & Lachman, 2006) also explains self-regulation of development in terms of avoiding losses, increasing resources and managing possible failures. In the life-span theory of control, age-graded developmental tasks are considered as crucial for adaptive development of the person. Suitable self-regulation strategies are

needed as the person encounters new developmental tasks in different stages of life. One of the challenges is setting the right kind of goals and using the strategies that are most optimal for the specific culturally defined, age-graded demands the person encounters. People can choose goals and strategies that aim to increase the personal resources, or goals and strategies that aim to protect the self and to preserve the remaining personal resources. The former approach is the most optimal in adolescence and young adulthood whereas preserving remaining strengths is more optimal as the person ages and opportunities for increasing physical, psychological, economical and social resources decrease. The ability to make compromises and choose attainable age-graded goals is important for well-being of the person, since holding on to no longer attainable goals could decrease persons feeling of self-efficacy. Unlike in elder people, adolescents and especially young adults are in general living in an age-graded context in which the opportunities for goal attainment is high and constraints low. In this life-stage it is crucial to set personal goals that increase competencies and answer to the demands cultural demands of establishing career and later a family, and missing these goals can lead to maladaptive goal patterns directing the whole life-path. As Nurmi (1989) has noted, it seems that the personal goals are self-directive in the way that the chosen goals and how successfully one manages these goals influences the following goal setting, by affecting the available knowledge, beliefs and skills and by affecting what actual opportunities are available for the person. Goals form an accumulative cycle (Salmela-Aro et al. 1997), that lead some to develop future-orientation (Nurmi 1989) that helps in setting adaptive age-graded goals in the future life, but some to drop-out from the normative developmental path.

As we can see from the two different self-regulation models above, the self-regulatory functioning seems to be similar in different domains. In achievement and in personal goal domains people can focus on the task and in building competencies and resources or optionally focus on controlling emotions and protecting the self and in preserving the resources the person has. If the direction (task/self) and the type of strategies applied are maladaptive for the situation, it can have negative consequences for the achievement, development and well-being of the person. Both types of self-regulation, the regulation of learning and regulation of personal goals contribute to the

regulation of development and can be seen as complementary. Together these could be used to build a whole new framework for understanding the development of different life-paths.

As I argued earlier, additional support for the assumption that there might exist some kind of transfer effect between self-regulated learning and regulation of personal goals, comes from the finding, that students with highly adaptive achievement goal profile experience more progress in relation to their career and study related personal goals than students with maladaptive profiles (Tuominen-Soini et al., 2008). If students with more adaptive profile, who are more prone to self-regulate their learning, experience more progress in their study and career goals e.g. manage these goals better, it could implicate a connection between achievement goal orientations and self-regulation of personal goals. Also Miller and Brickman (2004) found in their studies connections between adaptive goal setting in the school context and personal future goals. The high achieving students were more prone to self-regulate their learning by setting adaptive achievement goals. These students saw these study goals as instrumental for pursuing their personal career goals.

4.6 Methodological Considerations

Since a person-centered approach was adopted in this thesis, the use of person-centered methods was a logical choice. As one of the core assumptions was that students endorse multiple, often even competing achievement goals, the natural choice was to apply such measurement and analyzing methods that would be in line with this assumption. Many studies recognize the need to talk about multiple goals, but in practice concentrate on measuring relations between singular isolated goal variables and other constructs (Elliot et al., 1997). To avoid this discrepancy person-centered methodological approach (Niemi-virta, 2002a) was chosen.

In the present study, the instrument used for measuring the achievement goal orientations was chosen, as it has been used repeatedly with similar findings. The present model is in line with the previous findings. The overall model fit was

considered good. The model choice was considered here parsimonious and acceptable, and therefore further adjustment and improvements were not considered necessary.

The strengths of the chosen clustering method, latent class clustering analysis (LCCA)(Vermunth et al., 2002), is that unlike most of the clustering methods, it is a model-based analyzing method with various model-fit indexes. In LCCA it is assumed that k latent groups or latent classes underlie the data set and that each case belongs to only one group. The number of classes and their sizes are not known *a priori*. Some degree of uncertainty in the classification is assumed and thus posterior probability of belonging to each class is assigned to each case. Whereas for example in K-means cluster analysis the number of classes is decided a priori and cases are directly assigned into classes that have similar mean distribution, in LCCA the homogeneity is defined in terms of probabilities. (Vermunth. et al., 2002) and the number and structure of the model are decided based on several goodness of fit-indexes.

In LCCA, one criterion to evaluate and select an optimal model is the degree of classification certainty. For each case, posterior probabilities reflect the probability of belonging to each latent class specified in the tested model (Vermunt et al., 2002). Cases may, therefore, be associated with more than one class. They are assigned to the class with the highest membership probability, but may have fractional class membership across groups. In a perfect classification system, cases would have a probability of 1 of belonging to one class and 0 membership probability for the rest of the classes. Individual posterior probabilities are used to estimate the overall classification precision for each latent class. That each case is signed into one class based on the probabilities means that we acknowledge the possibility that with some changes to the model, some of the cases could fall into different classes than in the chosen model.

The original instrument for measuring personal goals, the personal project analysis (PPA) (Little, 1983), includes also a section where the participant appraises his or her personal goal in several dimensions such as the progress, enjoyment, social support

from significant others, meaningfulness and so forth. By applying the original version of PPA with the goal appraisal scales it would have been possible to obtain more in depth information about the meaning that the personal goals have for the participants. However, such information has been obtained previously in other studies (Tuominen-Soini et al., 2008). Without any prior expectations, it turned out that together with Tuominen-Soinis and her colleagues work, these two studies reveal “both sides of the coin” as my study reveals relation between the achievement goal orientations and study and career related personal goals and Tuominen-Soinis research on the other hand demonstrated that motivational profiles are related to the way personal study and career goals are appraised.

4.7 Pedagogical Considerations

The results from this study indicate relations between achievement goal orientations and personal, study and work related goals. It appears that the students with more adaptive goal profiles also endorse more adaptive personal goals, which are in line with the developmental demands. One option in the future would be to offer career and educational counseling that would address the issues with constructing adaptive personal goals that promote achievement and subjective well-being.

It is also possible, that interventions aimed at enhancing the adaptiveness of achievement behavior, could have broader effects outside the classroom. Promoting self-regulatory skills might enhance the management of personal study and career related goals as well. Some support for this speculation comes from the study of Baumeister, Gailliot, DeWall and Oaten (2006), whose research demonstrated that interventions aimed at increasing self-regulation in one domain (such as eating), increased self-regulation also in other life-domains (such as work).

According to several studies, people who have less adaptive, age-congruent personal goals, display more depressive symptoms (Nurmi et al., 2002) In addition the maladaptive achievement goal orientation exposes a risk for the subjective well-being (Tuominen-Soini et al., 2011). Taking into consideration these two risk factors, the performance-avoidance and the avoidance-oriented students seem to need more guidance with constructing personal goals. It could be that these students lack

meaningful, adaptive future-oriented goals, because their expectations for themselves are low. There is a risk that these individuals, without professional support and guidance, will fall out from the formal education and the working life.

This study does not only contribute to the achievement goal research, but also to the more broad line of research interested in multiple developmental pathways. The results from this study grow our understanding of how the interaction between the school context and the individuals' psychological make-up create certain kinds of mindsets –the positive, future oriented ones and the more limited, shortsighted ones. We need to provide guidance for the students in order to help them recognize the possibilities the future has to offer for them, and more importantly, the potential they have within themselves.

4.8 Limitations and Recommendations for Future Research

The relations between personal study and career related goals and achievement goal orientations should be investigated further in longitudinal research in order to see whether they show relatedness over time. This way we could obtain more in depth information about the way personal goals and achievement goal orientations evolve together from adolescence till adulthood. Of interest would be also the question whether the personal goals are manifested in the actual educational and occupational choices. According to previous research, achievement goal orientations are rather stable over time. If achievement goal orientations are related to the way personal educational and occupational goals are constructed then we could expect stability over time in the personal goals as well. However, other variables should be considered in the research, as they might affect the interplay between achievement goal orientations and personal goals. Also the possibility of a third factor(s) behind the relation between achievement goal orientations and personal goals need to be investigated in the future. Thus, the future research should concentrate on the complicated interrelated processes in the evolvement of personal study- and career-related goals and the achievement goal group membership. Potential mediating mechanisms, such as self-regulation discussed earlier, should also be included in the future research. Interesting question would be whether individuals who move to some other

achievement goal orientation profile group experience changes in their personal educational and career goals as a function of this motivational change.

The present study included participants both from vocational school and high school. Because of the several differences between the academic and vocational track, the differences between the two groups according to their achievement goal orientations, personal goals and the relations between these, should be investigated in the future. Findings from previous research suggest that personal goals function differently depending on the educational track. For example students at the academic track who have many interpersonal projects have higher grades in high school whereas in vocational school, family-related projects predict being in a professional work status rather than being unemployed later in life (Salmela-Aro et al., 2007). By differentiating the vocational and the academic track, different relations between the adaptive and maladaptive orientations and personal goal might be found. The gender was included in the between groups variance analysis as a control variable, but because of the limited scope of this research, the gender effects were not further studied. The gender differences could be studied further in the future research.

The results suggest that avoidance and performance avoidance together create the biggest risk factor with regards to motivation, achievement and well-being. It should be studied further in the future research when and how this motivational pattern starts to emerge.

Also other constructs related to personal career goals could be included in the future research. For example it would be a very interesting research question whether the achievement goal orientations are related to the development of career identities (see for example Malanchuk et al., 2010). Also potential third factors such as personality traits, temperament, self-efficacy and so forth should also be considered in the future research. The contemporary research focuses not only in the dispositional level, but also on the effects of the school-environment and teacher-student relationship. It should be investigated in the future whether teachers advocate future career and educational opportunities differently to differently motivated students. Also parents should be included in the future research.

5. Conclusion

As I discussed in the beginning, more knowledge about the social-psychological processes that direct the person to adopt certain kinds of personal goals is required, as these goals might affect the adjustment to adulthood and subjective well-being in a longer term. The findings from the present study show that achievement goal orientations might be related to the way career and educational personal goals are constructed.

One concern in this study was whether students with less adaptive profiles would also display similar patterns in their preferences for personal goals. The results demonstrated how the least adaptive profiles, namely the avoidance oriented and the disengaged do indeed endorse less study and career goals, which are considered as important developmental tasks.

The fact that the indifferent students did not differ much from their more adaptive peers with regards to the personal goals is also an interesting finding. Since this average group is the biggest of all of the orientation groups, we could assume that these students represent the “average” person in other aspects too. If these students, despite their lack of interest in schoolwork, like most of the “average” people, manage to go through the developmental transitions and obtain normal lives, this might suggest that the personal goals have an important harnessing function. It seems as though the dimension of avoidance orientation might play an important differentiating role here. We need more research about the antecedents, co-operating variables and effects that are involved in the development of avoidance-orientation, in order to determine why the avoidance and the performance-avoidance oriented students might lack future-orientation (Nurmi, 1989).

The student-centered pedagogics have received growing attention in the last years and the approach has been brought up in the public conversation concerning the dropping performance levels of Finnish youth with regards to the international comparison of educational performance. Considering every learner as an individual is one of the core premises in this pedagogical approach. However, before any real student-centeredness is possible to realize, we must become more aware of the unique patterns of learning and adjustment to school environment. The present study contributes to this pursuit,

as it explores the multiple psychological processes, which affect, not only learning, but also the general attitudes towards school and education and subjective well-being. In the approach adopted here, one of the assumptions is that learning, and especially development, cannot be fully understood if we study isolated processes. We must include multiple psychological phenomena in multiple domains into the study of learning and development. This does not only help us to understand better how learning and different life-paths evolve, but also helps us to see persons as a unique, important, functioning wholes. This for me is not just a matter of conceptualization, but also a question of ethics. As this line of person-centered socio-cognitive research progresses in the field of developmental psychology, we might be able in the future to identify those with multiple risk factors for educational disengagement, and thus, prevent the maladaptive life-trajectories.

6. References

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